

Case 3216***Spongia ventilabra* Linnaeus, 1767 (currently *Phakellia ventilabra*; Porifera): proposed conservation of the specific name and designation of a neotype**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name of the type species of the axinellid sponge genus *Phakellia* Bowerbank, 1862. The name in prevailing usage is *Spongia ventilabra* Linnaeus, 1767. This name is threatened by the use in 1912 of a senior objective synonym, *Spongia strigosa* Pallas, 1766. A neotype is designated for *Spongia ventilabra* Linnaeus, 1767.

Keywords. Nomenclature; taxonomy; Porifera; AXINELLIDAE; *Phakellia*; *Phakellia ventilabra*; sponges.

1. In 1766, Professor Peter Pallas introduced the name *Spongia strigosa* for a new species of fan-shaped sponge (family AXINELLIDAE) from 'Mare Americanum' (Pallas, 1766, p. 397). Pallas's description referred to a sponge described as '*planta marina foliacea & spongiosa, singulari modo ramosa*' (p. 184), and illustrated (pl. 95, fig. 8) as such in the *Thesaurus* of Albertus Seba (1758). This work corresponds to the third of Seba's four volumes, which was published about twenty years posthumously under the editorship of Pallas amongst others (see Engel, 1961).

2. Linnaeus (1767, p. 1296) described *Spongia ventilabra* from 'M. Norvegico' collected by Bishop Gunnerus at Drontheim (now Trondheim). This description also mentioned the illustration given by Seba and the description of *Spongia strigosa* given by Pallas. Pallas's and Linnaeus's names were based on the same source, that is Seba's figure, which was given to Seba by Gunnerus (see Esper, 1794, p. 211). The names *Spongia strigosa* and *Spongia ventilabra* are therefore objective synonyms.

3. In his encyclopaedia of nature, Esper (1794, pp. 209–211) included *Spongia ventilabra* Linnaeus and indicated that it could be the same species described by Pallas as *Spongia strigosa*, but he made no formal synonymy. As if to indicate his own uncertainty, Esper included both specific names in the legend to his own illustration (Spong, tab XII).

4. Fleming (1828, p. 523) used Linnaeus's specific name in the new combination *Halichondria ventilabra* without mentioning *Spongia strigosa*. Later, Johnston (1842) referred to the species as *Halichondria ventilabrum* (sic) without explanation and since then the specific name has been spelt incorrectly as *H. ventilabrum*.

5. Under the modern Code, Johnston's emendation of the spelling *H. ventilabra* to *H. ventilabrum* was an incorrect subsequent spelling because the specific name *H. ventilabra* was introduced as a noun in apposition, and as such its suffix is not

changed to match the gender of the generic name with which it is in combination (Article 34.2.1); in any case both *Halichondria* and *Spongia* are feminine. However, in defence of Johnston, we note that 'ventilabrum' is the correct Latin noun meaning an implement for winnowing grain (Lewis & Short, 1980) and it was also the spelling used by Gunnerus (Acta. Nidrof. vol. 4, fig. 4, fide Linnaeus, 1767).

6. Bowerbank (1862, p. 1109) designated *Halichondria ventilabrum* (sic) as the type species of his new genus *Phakellia*. *Phakellia* is now a large genus of axinellid sponges with 34 described and many unnamed species worldwide (B. Alvarez, unpublished data). Vosmaer (1912), following Esper (1794), identified the synonymy between the names *Spongia strigosa* and *Spongia ventilabra* and stated that the valid name for the type species of *Phakellia* was *P. strigosa* (Pallas). However, no author except Bergquist (1970), who merely listed the name *P. strigosa*, has followed Vosmaer in the past ninety years.

7. Vosmaer (1912) claimed that he had found a dried sponge in the collection of the Museum of Leiden which, in his opinion, strongly resembled the figure of Seba (see para. 1 above) and he suggested that this specimen was the type specimen of *Spongia ventilabra* Linnaeus. However, we believe Vosmaer's conclusion is unjustified for several reasons. First, it is likely that Seba's figure was based solely on the drawing by Gunnerus. Even if Seba's illustration were based on an actual specimen, it is unlikely still to be extant because most of the specimens illustrated in his *Thesaurus* were ruined by mould and insects, or were sold to meet the expenses of printing the final two volumes of the *Thesaurus* (Engel, 1961). Anyway, Vosmaer's specimen (M.L.B. 3) cannot now be located in the Leiden sponge collection (pers. comm. to B. Alvarez by J.C. den Hartog, 22 May 1996). There are no records attributable to *Spongia ventilabra* in the Linnaean collections housed at the Linnean Society of London or at the Museum of Uppsala in Sweden (pers. comm. to B. Alvarez by Kathie Way, Curator of Zoological Collections at the Natural History Museum, London).

8. Given that there is good evidence that the original specimen of this sponge is no longer extant we believe that a neotype designation is strongly needed. Neither the original description of *Spongia ventilabra* by Linnaeus (1767), nor the illustration of Seba cited within, provides an adequate basis for differentiation of this species from others in the large genus as it is presently understood (Alvarez & Hooper, 2002). For example, skeletal characters such as type and length of spicules, which are diagnostic at the species level within the genus *Phakellia*, were not mentioned in the original descriptions.

9. Several of the dry specimens upon which Bowerbank based the genus *Phakellia* are deposited at the Natural History Museum (London) and were examined by one of us (B. Alvarez) and they all agree with the present concept of *P. ventilabra* (Linnaeus). One of these specimens (registered as BMNH 10.1.1.2687) is here designated as the neotype for *Spongia ventilabra*. The specimen comes from the same locality (Norway) as the original Gunnerus specimen of *Spongia ventilabra* (see para. 2 above) and externally matches the description of Linnaeus (1767). The specimen is flabellate, approximately 23 cm high by 20 cm wide, with a short peduncle approximately 1 cm in diameter. Its surface is hispid and marked by a reticulum of spicule tracts, some of the ascending ones are thickened (5–7 mm) like veins. There is no specialised ectosomal skeleton. The choanosomal skeleton is reticulated with

primary tracts of sinuous strongyles (300–600 µm thick) and these are plumo-echinated by styles or connected by secondary unispicular or paucispicular tracts of styles or strongyles (60–200 µm thick). The spicules are sinuous strongyles (length 630–1060 µm, width 13–18 µm) and styles are straight, flexuous, or bent near the head (length 360–710 µm, width 10–15 µm). The external and skeletal features of *Phakellia ventilabrum* are illustrated (under that name) in Alvarez & Hooper (2002, p. 739).

10. The single adoption of the senior synonym *Spongia strigosa* Pallas, 1776 rather than *S. ventilabra* Linnaeus, 1767 by Vosmaer in 1912 (see para. 6. above) prevents the ‘automatic’ conservation of the later name under Article 23.9.1, and we submit this application in accordance with Article 23.9.3.

11. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *strigosa* Pallas, 1766, as published in the binomen *Spongia strigosa*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Phakellia* Bowerbank, 1862 (gender: feminine), type species by original designation *Spongia ventilabra* Linnaeus, 1767;
- (3) to place on the Official List of Specific Names in Zoology the name *ventilabra* Linnaeus, 1767, as published in the binomen *Spongia ventilabra* and as defined by the neotype (specimen BMNH 10.1.1.2687) designated in para. 9 above (specific name of the type species of *Phakellia* Bowerbank, 1862);
- (4) to place on the Official List of Rejected and Invalid Specific Names in Zoology the name *strigosa*, as published in the binomen *Spongia strigosa* Pallas, 1766 and suppressed in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).



Reproduction from Seba (1758, pl. 95, fig. 8) of '*planta marina foliacea & spongiosa, singulari modo ramosa*'.